

**Amendment to the Abstract:**

Please replace the Abstract with the following replacement Abstract:

**REPLACEMENT ABSTRACT**

**Abstract of the Disclosure**

A system and method is provided for reconstructing a surface of an object. A system includes an input for receiving a 2-dimensional grid of measurements representing a surface of an object. Each grid point of the 2-dimensional grid of measurements includes information on the slope of the surface in the x-direction and y-direction. A processor selects a 2-dimensional part of the grid and fits a corresponding part of the surface to the measurements of all grid points in the selected part. For each grid point of the selected part, the fitting is based on both the corresponding first and second slope information. An output of the system provides a representation of at least the reconstructed surface part to a user.